



July 31, 2018

Re: ATC # 282219 Hickory NC, NC – 130 ft. Stealth Canister Monopole w/ Proposed 20 ft. Extension

To Whom It May Concern,

The above noted tower is owned by American Tower Corporation and located in Dare County, NC on 148-A Ocean Boulevard, Southern Shores, NC 27949-3529. This tower has been evaluated with regards to the likelihood of a structural collapse in the event of catastrophic failure.

This tower has been designed and analyzed per the following criteria:

*Basic Wind Speed: 135 mph (3-Second Gust, V_{asd})
Basic Wind Speed w/ Ice: 30 mph (3-Second Gust) w/ 0.25" radial ice concurrent
Code: ANSI/TIA-222-G / 2009 IBC / 2012 North Carolina Building Code*

TIA-222-G places a minimum factor of safety with respect to wind of 1.78. Also factors of safety with respect to seismic and combinations with wind and ice greatly exceed the minimum 1.78. Due to the numerous safety factors incorporated into the design standard, failure would not be expected to occur at the exact moment the design loads are exceeded.

Statistically almost all failures occur in concurrence with natural disasters such as tornadoes or hurricanes, during which total devastation of the surrounding area would also occur. Due also to the design characteristics and safety factors incorporated into both the material and loading of the tower structure, a catastrophic failure would be highly uncommon.

Based upon review of the structure, in the unlikely event of failure, the expected fall radius would be 150-ft.

If any further questions arise, please contact ATC Engineering at Engineering@americantower.com

Sincerely,

Brendan M Smith, PE
Engineering Manager, Structural